

# METHOD OF FORMING BIPOLAR PLATE MODULES

## Abstract

A bipolar plate module includes an anode, a cathode and a membrane electrode assembly (MEA) disposed therebetween. A sealing material forms a sealing layer between the plates and encapsulates a portion of the MEA. A method of manufacturing involves injection of the sealing material into a groove of the anode plate and through a through-hole disposed within the groove. The sealing material fills the space between the anode and cathode to form the sealing layer and encapsulates the portion of the MEA to form the edge seal. Further, material injected on the outer surface of the anode forms an insulation layer when compressed. An alternate method includes utilizing a screen printing technique to deposit the material upon the anode, placing the MEA and cathode in their proper positions, and then curing the material to form the sealing layer and to form an edge seal about the portion of the MEA.